



6H-SiC Pressure Sensors for High Temperature Applications

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INNOVATION

A silicon carbide (SiC) pressure sensor for use at temperatures as high as 500°C, which is approximately 100°C higher than can be withstood by presently available silicon pressure sensors

ACCOMPLISHMENTS

- ◆ Prototype SiC pressure sensors were developed in Phase II contract
- ◆ The pressure sensors were shown to be capable of operating at 500°C for several hours
- ◆ Provided GRC with prototype SiC pressure sensors

COMMERCIALIZATION

- ◆ A high temperature pressure sensor for engine aircraft development and test. Fast response pressure measurements in the compressor hot section for stall detection and control
- ◆ This pressure sensor can be used for other high temperature turbine engine applications



SiC Sensor Mounted on a Header

GOVERNMENT/SCIENCE APPLICATIONS

- ◆ Phase III of \$500K to provide GRC with 6-10 prototype SiC pressure sensors. Funding provided by Advanced High Temperature Engine Material Technology Program (HITEMP) and Higher Operating Temperature Propulsion Components (HOTPC) Program.
- ◆ A prototype SiC pressure sensor to be tested in the compressor of a gas turbine engine by October 2000
- ◆ For use in military aircraft and any other turbine engine, e.g., tanks